

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Kensaku FUJII et al.

Application No.: 10/532,424

Confirmation No.: 3734

Filed: April 22, 2005

Art Unit: 1791

For: Tire with rotation period indication hole, and  
method of indicating tire rotation period

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Examiner: S. D. Maki

**REPLY BRIEF FILED UNDER 37 C.F.R. 41.41**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Madam:

**INTRODUCTORY COMMENTS**

Appellants submit herewith a Reply Brief in response to the Examiner's Answer dated May 15, 2009.

Claims 12, 15-18 and 20 stand rejected under 35 USC § 103(a) as being unpatentable over JP 59-25684 (per the Examiner, "Japan '684") in view of SU 408333 (per the Examiner, "Soviet Union") and optionally JP 55-110608 A (per the Examiner, "Japan '608") and/or US 5980668 (Slingluff). This rejection was stated and argued in the Final Office Action dated June 10, 2008, and is further argued in the Examiner's Answer.

The Examiner acknowledges that the disclosure in Japan 684 cannot meet the requirements of Appellant's claim 12, which is the only independent claim in the application. That is, on page 5 of the Examiner's Answer, the Examiner states, "Japan 684 does not recite providing the steps of the wear indicating hole such that one step has a contour including a

polygon formed by straight lines and the other step has a different contour including a loop shape formed by a curved lines."

As a remedy for the acknowledged deficiencies in the Japan 684 disclosure vis-à-vis the requirements of Appellant's claims, the Examiner proposes a modification of the tread wear indicator disclosed in Japan 684. The proposed modification of the Japan 684 tread wear indicator is described in the paragraph bridging pages 8-9 of the Examiner's Answer. According to the Examiner, "it would have been obvious to one of ordinary skill in the art to shape the steps of Japan 684's wear indicating hole such that one step (one perimeter edge) has a contour including a polygon formed by straight lines and the other step (other perimeter edge) has a different contour including a loop shape formed by a curved lines since Soviet Union shows facilitating visual identification of different steps of a wear indicator by providing one step with straight lines and another step with curved lines (see figure 6) as an alternative to providing all steps with straight lines (figure 4) or providing all steps with curved lines (figure 5)."

In a discussion of the disclosure in Soviet Union, on page 8 of Appellant's Appeal Brief, Appellants stated, "SU '833 also discloses tread wear indicators, in particular indicators in the form of projections with steps. Figures 2 and 4 of SU '833 show projections with straight-sided steps; figure 5 shows a projection with circular steps; and figure 6 shows a projection with two straight-sided steps and an upper circular step." In the same paragraph, Appellants added, "Figure 3 of SU '833 clearly shows a projection with circular steps disposed in a recess in the tread." Appellants maintain that the teachings in Soviet Union are limited to tread wear indicators formed as stepped projections and that these teachings are not obviously applicable to a tread wear indicator formed as a stepped recess, like the tread wear indicators disclosed in Japan 684.

The Examiner does not agree with Appellants that the disclosure in Soviet Union is limited to tread wear indicators formed as stepped projections. On page 6 of the Examiner's Answer, the Examiner states, "With respect to Figures 4-6, the cross hatching of the wear indicator can be solid tread material ("a stepped projection") or the cross hatching of the wear

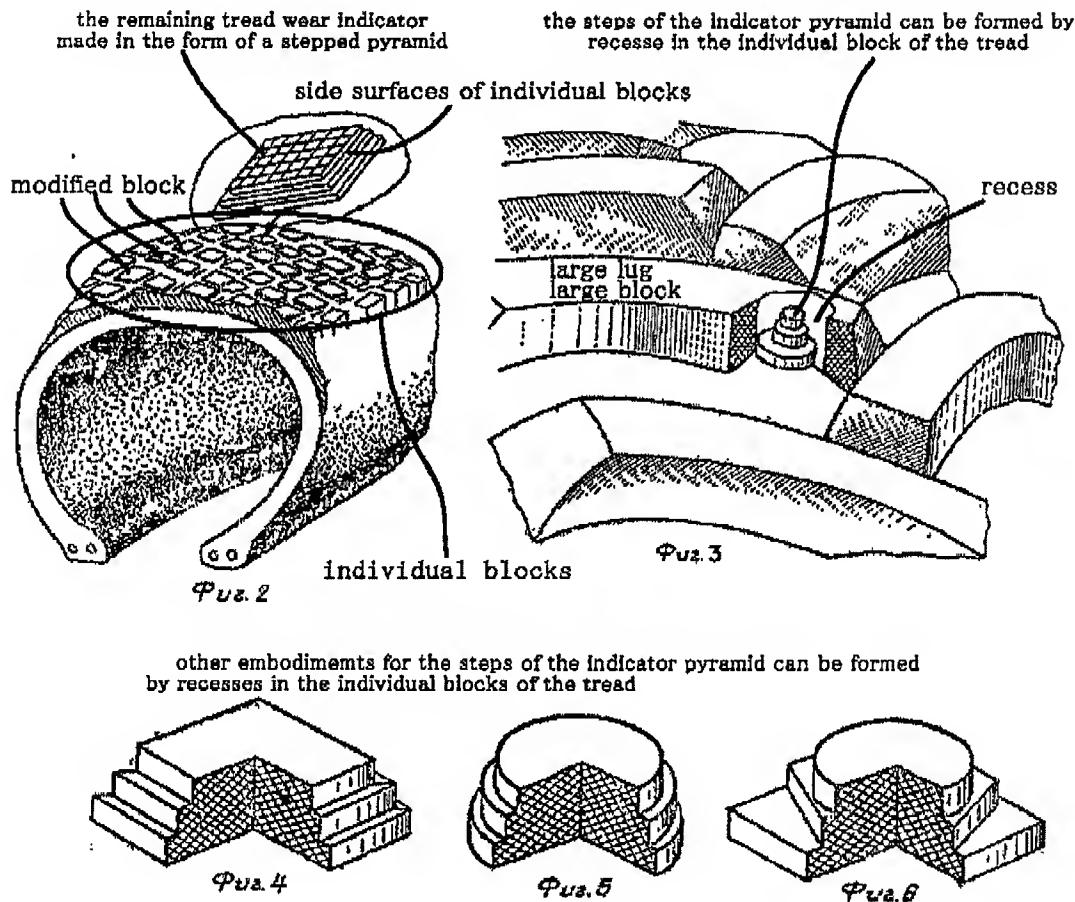
indicator can be space surrounded by tread material ("a stepped hole")." Appellants submit that the Examiner has misconstrued the disclosure in Soviet Union.

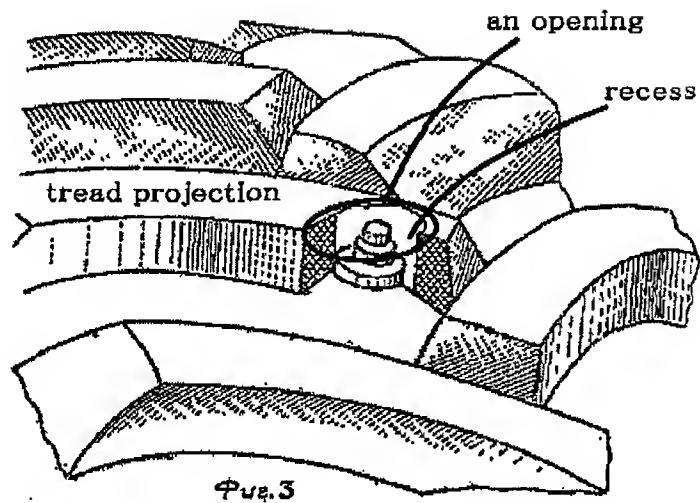
On pages 3-4 of English translation of Soviet Union provided by the Examiner, only solid stepped projections, as shown in Figures 1 to 6, are described. No description is made of a stepped space surrounded by tread material ("a stepped hole"). The foregoing description in the translation is applicable only to tread wear indicators shown in Figures 1-6 of Soviet Union, and all of these tread wear indicators are clearly illustrated as stepped projections. In claim 3 on page 4 of the translation, "the stepped pyramid of the remaining tread wear indicator is formed by recesses in the individual blocks of the tread" recites the configuration of the tread wear indicator illustrated in Figure 3.

The steps of the pyramidal projection shown in Figure 3 of Soviet Union could be viewed as forming a stepped interface between the stepped projection and the opening in the tread lug surrounding the projection. At the tread surface, the highest step of the pyramidal projection would be surrounded by a ring-shaped opening. At the level of lower steps of the pyramidal projection, the *inner* diameter of the ring would become larger, since the lower steps of the projection are larger. However, *the size and shape of the outer edge of the ring would not change.* (There is no disclosure in Soviet Union that the outer surface of the opening has different sizes or shapes at different levels.) Thus, the *steps* of the opening in the tread would be smallest at the tread surface and would be larger at lower depths, and a "second step" of this opening could not be regarded as "inscribed in or included in" a "first step." Since there is no disclosure in Soviet Union that the walls of the opening surrounding the projection are other than straight-sided, there is no basis for concluding that the shape of the opening about the projection would change as tread wear occurs.

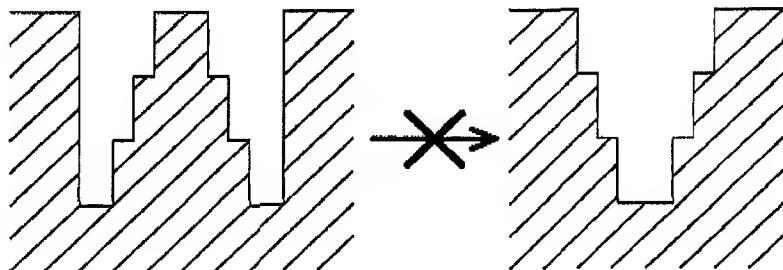
Conventionally, a tire tread is molded after the tread material is applied onto a tire carcass. If the tread were to have the stepped recesses envisioned by the Examiner, i.e., recesses that are smaller at the tread surface, the tread material could not be molded after application to the tire carcass. Appellants submit, then, that the Examiner's interpretation of the disclosure in Soviet is not only at odds with the clear disclosure in Soviet Union but is also illogical.

The foregoing discussion of the disclosure in Soviet Union is illustrated in the marked-up drawings Figures of Soviet Union presented below.





The disclosure in Soviet Union simply does not lend itself to the Examiner's interpretation, as illustrated below.



The clear teachings in Soviet Union are that the steps of the stepped projection have different contours. Soviet Union does *not* teach that the hole has a stepped side surface. The stepped projection of Soviet Union differs from the wear indicating hole of Japan 684. That is, one is a convex shape and the other is a concave shape. Appellants submit that the teachings of solid stepped projections in Soviet Union would not be obviously applicable, as the Examiner contends, to the stepped recesses in Japan 684. the Examiner's statement, "Soviet Union's teachings as to the shapes for steps of a tire tread wear indicator are applicable to the shapes for the steps of Japan 684's tire tread wear indicator" is based on a flawed interpretation of the disclosure in Soviet Union and cannot therefore provide support for the modification of the Japan tread wear indicator proposed by the Examiner.

The Appellant's arguments for non-obviousness of the combination of disclosures in Japan 684 and Soviet Union proposed by the Examiner would not have been obvious at least for the following reasons:

- (a) Soviet Union does not teach that the stepped pyramid is formed only by a recess without a projection.
- (b) Soviet Union teaches only that a stepped indicator with pyramid shape is disposed in a recess in the individual block of tread.
- (c) Soviet Union provides no basis for the Examiner's contention that "the cross hatching of the wear indicator can be solid material ("a stepped projection") or the cross hatching of the wear indicator can be space surrounded by tread material ("a stepped hole").

#### CONCLUSION

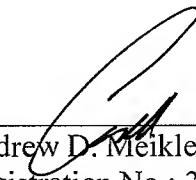
In view of the foregoing observations and arguments, an in view of the observations and arguments presented in Appellant's Appeal Brief, Appellants submit that no reasonable combination of the disclosures in JP '684, SU '833, JP '608 and Slingluff can properly serve as a basis for rejecting independent claim 12 or dependent claims 15-18 and 20 under 35 USC § 103(a). Accordingly, Appellants respectfully request that the Examiner's rejection of these claims be reversed.

If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren, Reg. No. 32,874, at the telephone number provided below, so that these matters can be addressed and resolved expeditiously.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated: July 8, 2009

Respectfully submitted,

By   
Andrew D. Meikle  
Registration No.: 32,868  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant